

To Hunt Another Day

It was an unusual request, but students and instructors at the Monticello Occupational Education Center proved the *American Inventor* has nothing over Arkansas ingenuity. While they haven't hit prime time yet, they have the satisfaction of knowing their invention will help a 90-year-old man hunt again.

That man was Athel Hill, who had lost the vision in his right eye. The avid hunter thought he'd put his guns away for good. There was no way, at his age, that he was going to learn to shoot left-handed. In stepped his son, Norman Hill, with an idea. As superintendent of the Monticello School District, Norman was quite familiar with the range and quality of community projects the students at the center produce. Maybe, just maybe, they could come up with something to help his father.

Norman mentioned the problem to Darrell McDaniel, a machine tool instructor (and former student) at the center. Darrell thought about it and got his students to brainstorm. A month later, he and his students had crafted HOG – or Hill's Off-set Gun Sight. The aluminum device, shaped somewhat like a kazoo, attaches to the end of the gun barrel and sets the sight to the left of the gun. It has a sliding mechanism to adjust for a hunter's specific vision problem.

Normally, Darrell explains, a design would be drawn first and then the prototype would be manufactured. But in this case, he and two of his students, B.J. Sivils and Kevin Kelly, fabricated the device on a new CNC Haas milling machine the program recently bought. Then Cayce Guy, a sophomore in Becky Flemister's computer-aided drafting class, produced a finely detailed design drawing based on the prototype.

All of his students learned a lot from this project. One important lesson was attention to detail. "Everything's about doing stuff fast these days," Darrell says. About halfway through making the first design, he realized it was a quarter inch too short. While a quarter inch may not seem like much to the students, Darrell knew that little bit would keep the device from working properly. So they started over.

"It doesn't matter how fast you do something," Darrell says. "What matters is if it works. . . . Sometimes you do have to go back to the drawing board a couple times."

Another important lesson was the first-hand experience with the manufacturing process. Darrell tells his students: "Everything starts off with a need, a desire, or a want. That's the way manufacturing works." In this case, it was a man's desire to hunt again that drove the process.

After identifying the need and producing the product, the next step in manufacturing is marketing. Darrell says that as he and the students were working on this project, they started talking about family members who could benefit from it. They're open to producing more of the HOG Sight and wouldn't mind patenting it.

Even if nothing more comes of the invention, Darrell says he takes satisfaction in knowing that Arvel Hill will get to hunt another day. But the biggest thrill he got out of this project was "seeing my boys get into something that works," he adds. "We've got to excite them or they're not going to learn."



Arkansas Inventors

Students at the Monticello Occupational Education Center recently gave an area resident the gift of hunting. Top: B.J. Sivils, left, Kevin Kelly, and their instructor Darrell McDaniel developed a prototype of an off-set gun sight. Bottom: Cayce Guy created a finely detailed design print from the prototype.